

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/014485

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B01D3/26 B01D3/20 B01J8/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01D B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/146525 A1 (JACOBS GARRY E ET AL) 7 August 2003 (2003-08-07) page 3, paragraph 32 - paragraph 34 figures 2-5	1-5
X	US 5 158 714 A (SHIH ET AL) 27 October 1992 (1992-10-27) column 4, line 50 - column 6, line 47 figures 2-4	1,5
X	US 2 686 046 A (GREEN PAUL R ET AL) 10 August 1954 (1954-08-10) the whole document	1,2
A	US 4 140 625 A (JENSEN ET AL) 20 February 1979 (1979-02-20) column 11, line 57 - column 12, line 18 figures 5-15	1-4

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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\* & \* document member of the same patent family

Date of the actual completion of the international search

14 April 2005

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21/04/2005

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/014485

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003146525	A1	07-08-2003	NONE
US 5158714	A	27-10-1992	AT 156721 T 15-08-1997
		AU 2183292 A 08-01-1993	
		CZ 9302516 A3 13-04-1994	
		DE 69221639 D1 18-09-1997	
		DE 69221639 T2 12-02-1998	
		EP 0641237 A1 08-03-1995	
		ES 2107541 T3 01-12-1997	
		FI 935173 A 30-11-1993	
		JP 6508063 T 14-09-1994	
		JP 3255918 B2 12-02-2002	
		OA 9825 A 15-04-1994	
		SK 131493 A3 06-07-1994	
		WO 9221418 A1 10-12-1992	
US 2686046	A	10-08-1954	NONE
US 4140625	A	20-02-1979	NONE